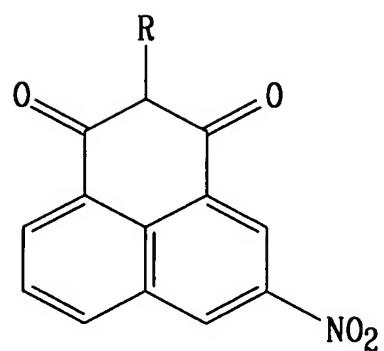


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING....
Inventor: Brian Leyland-Jones



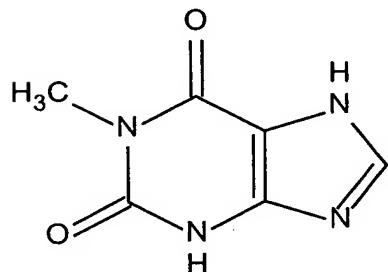
Basic Structure of N- (Aryl Substituted) –
naphthalidimides

FIGURE 1

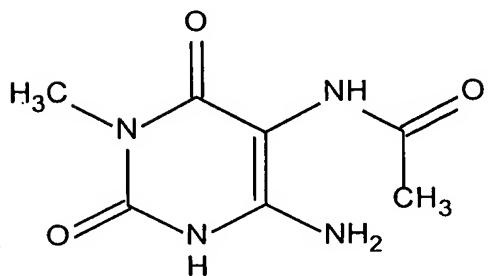


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING....
Inventor: Brian Leyland-Jones

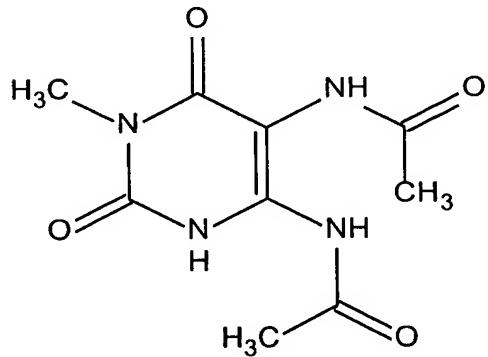
NAT2



1X (1-methylxanthine)



AAMU (5-acetamino-6-amino-methyluracil)



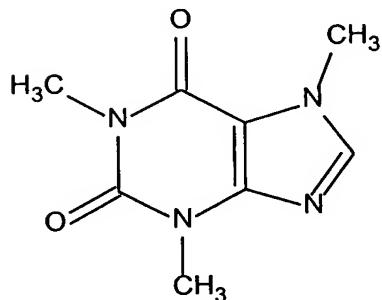
AFMU (5-acetamino-6-formylamino-methyluracil)

TEST - 2

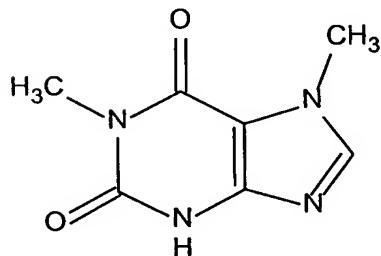


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING
Inventor: Brian Leyland-Jones

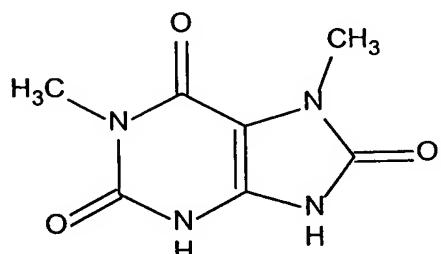
CYP1A2



Caffeine (1,3,7-trimethylxanthine)



1,7-DMX (1,7-dimethylxanthine)



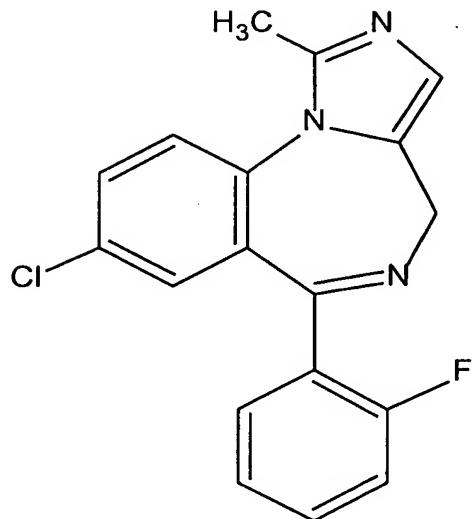
1,7-DMU (1,7-dimethyluracil)

TELE - 3

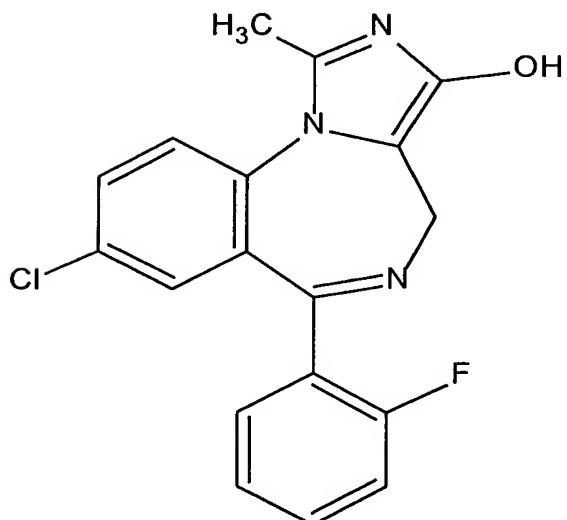


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPE.....
Inventor: Brian Leyland-Jones

CYP3A4



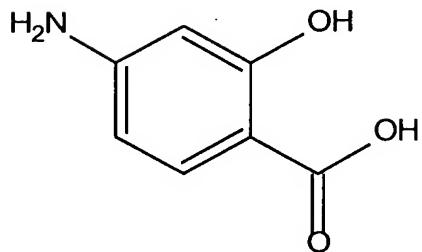
MDZ (Midazolam)



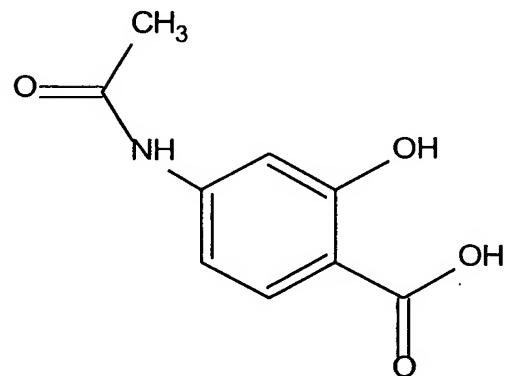
1-OH-MDZ (1-Hydroxymidazolam)



NAT1



p-ASA (p-aminosalicylic acid)



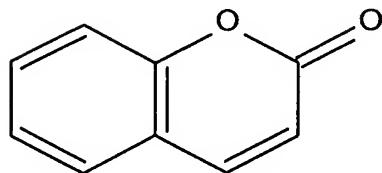
Acetyl-pASA (acetyl-p-aminosalicylic acid)

FEB - 5

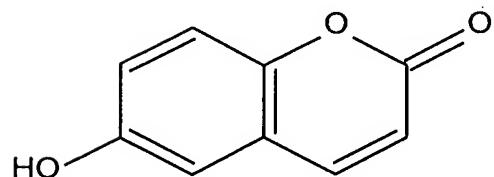


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPES
Inventor: Brian Leyland-Jones

CYP2A6



Coumarin

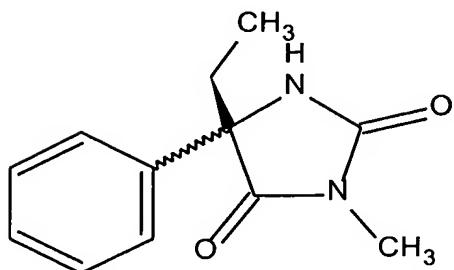


7-Hydroxycoumarin

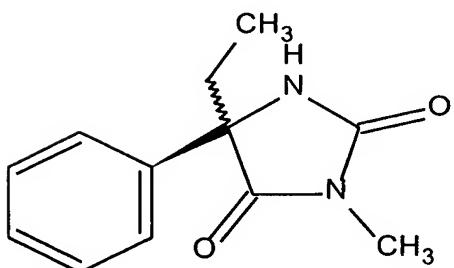
FIG. 6



CYP2C19



R- (-) -Mephentytoin



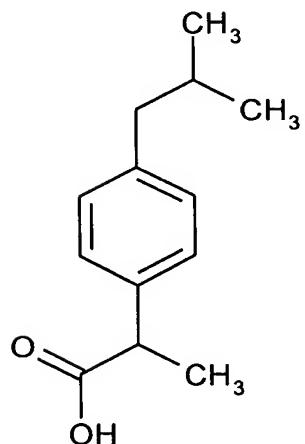
S- (+) -Mephentytoin

FEB - 7

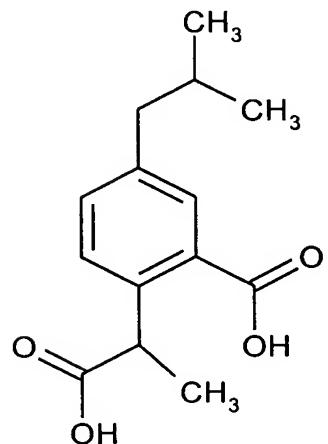


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPE IN G....
Inventor: Brian Leyland-Jones

CYP2C9



(s) - Ibuprofen



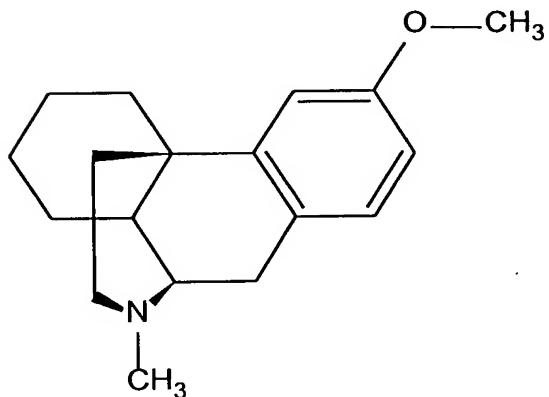
2-carboxyibuprofen

FIGURE 8

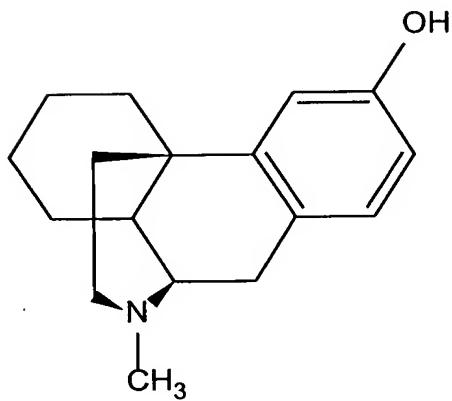


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING
Inventor: Brian Leyland-Jones

CYP2D6



Dextromethorphan



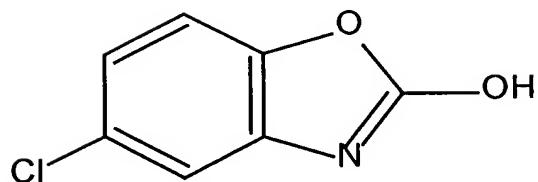
Dextrorphan

FEB - 9

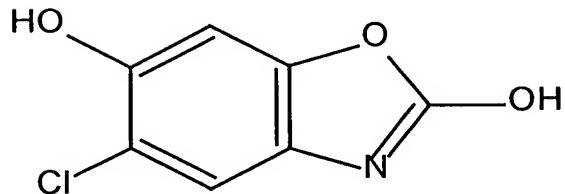


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYP.....
Inventor: Brian Leyland-Jones

CYP2E1



Clorazoxazone

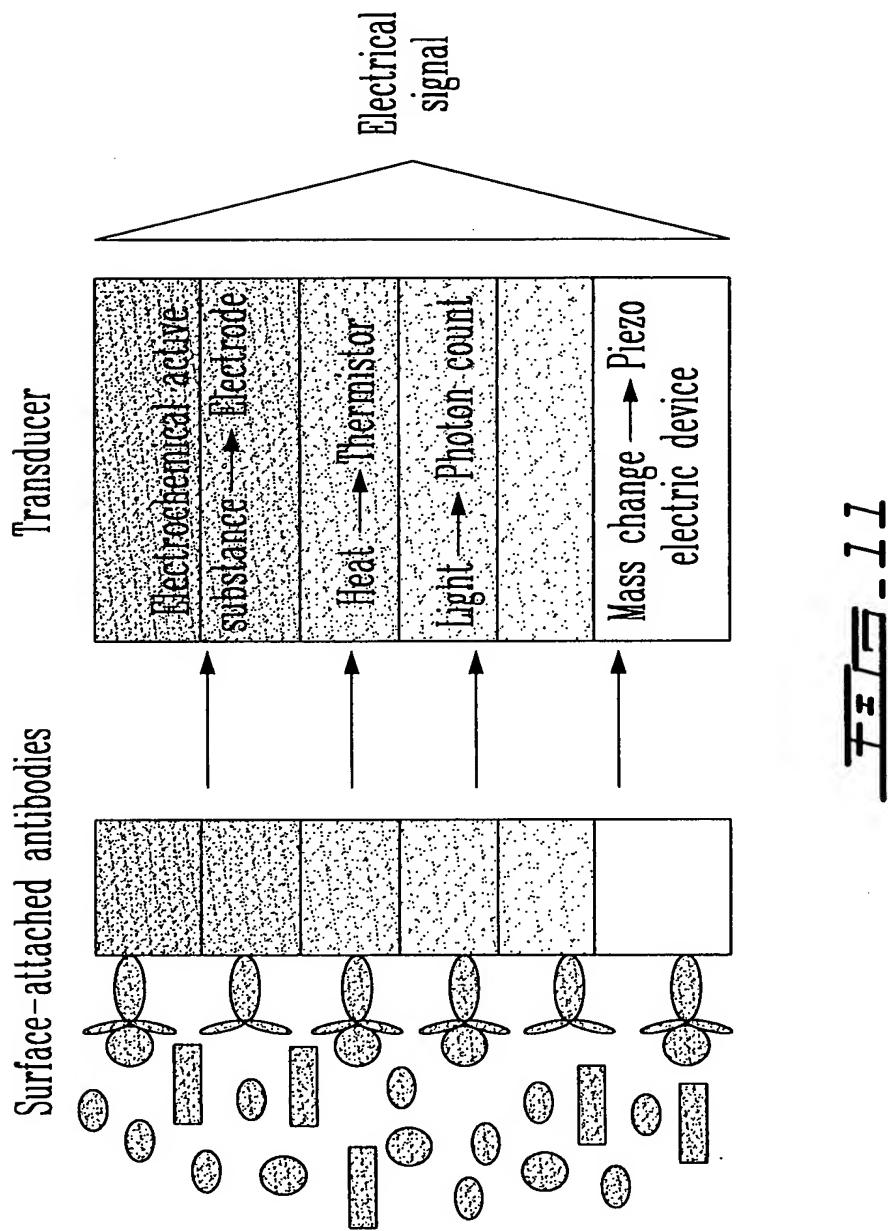


6-Hydroxychlorazoxazone

FIG - 10



Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING....
Inventor: Brian Leyland-Jones





Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING
Inventor: Brian Leyland-Jones

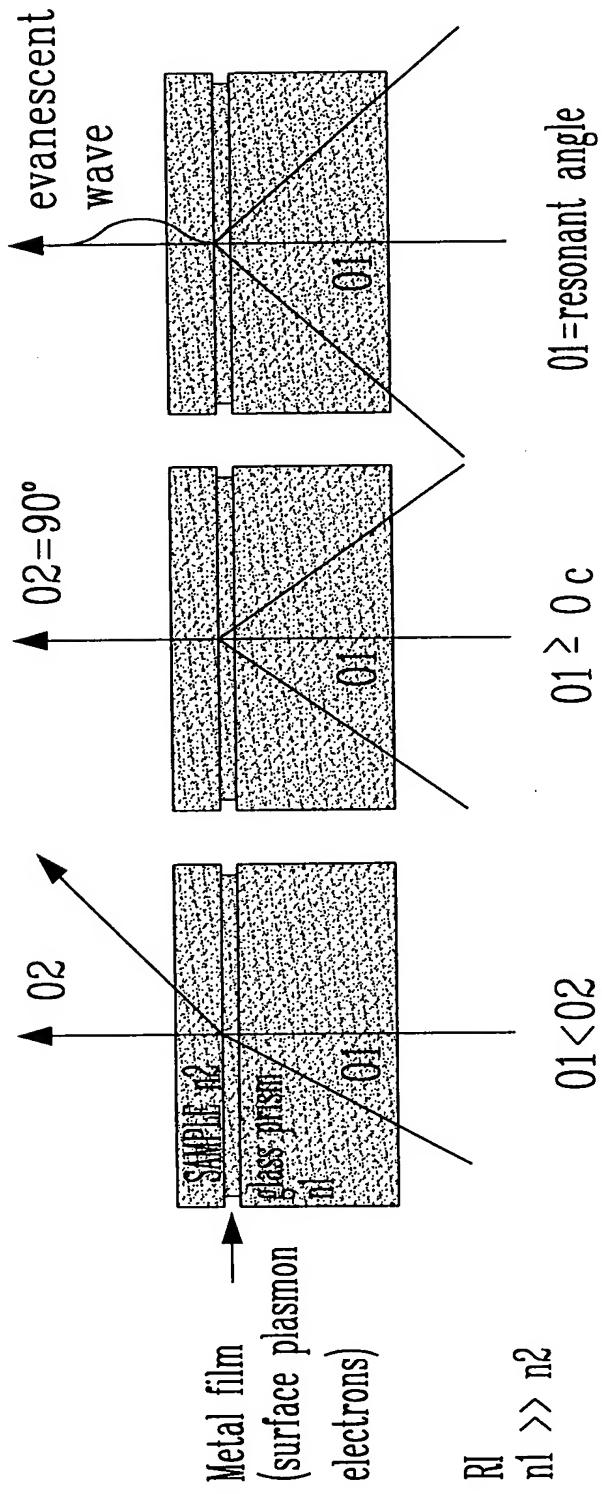


FIGURE - 12

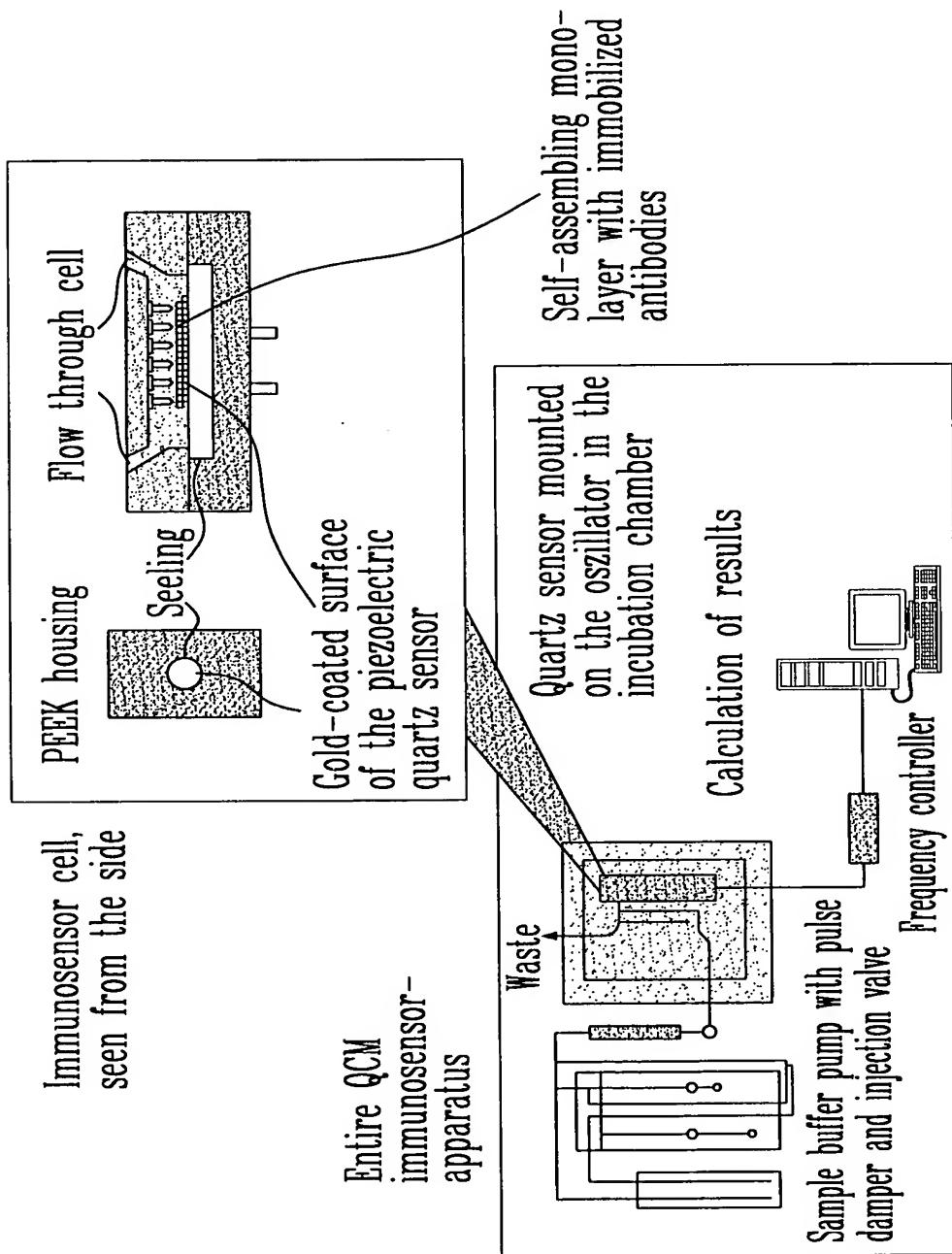
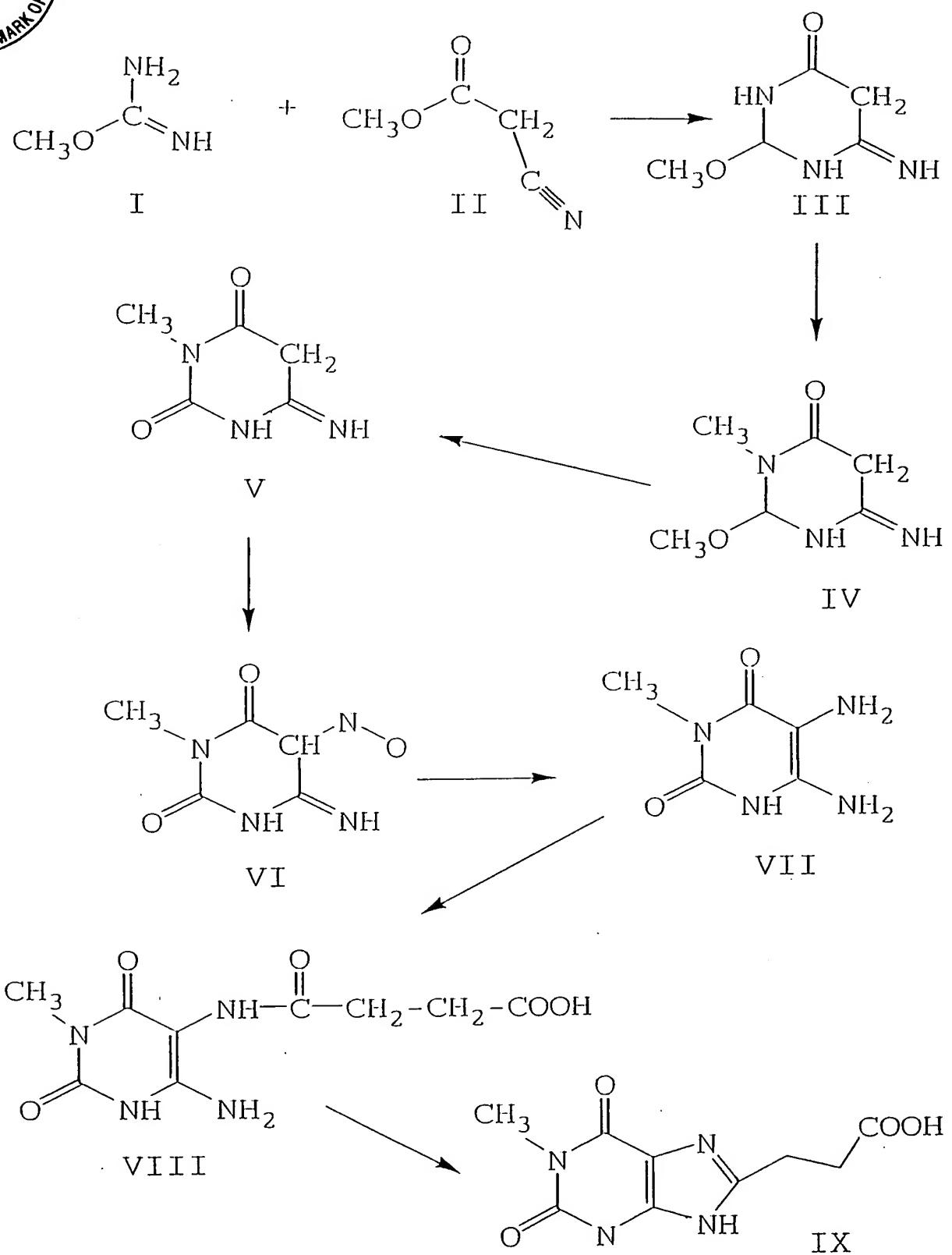


FIG - 13



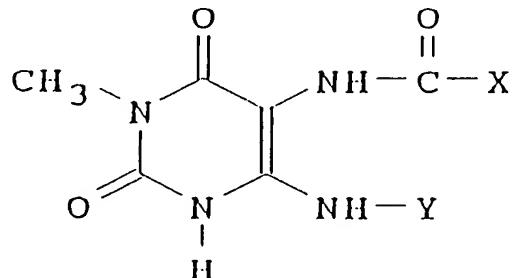
AAMU-hemisuccinic acid

1 methyl xanthine-8-propionic acid



Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING
Inventor: Brian Leyland-Jones

Derivatives of AAMU (5-acetamino-6-amino-3-methyluracil) or AFMU (5-acetamino-6-formylamino-3-methyluracil)

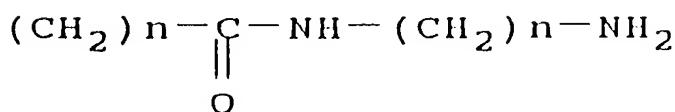
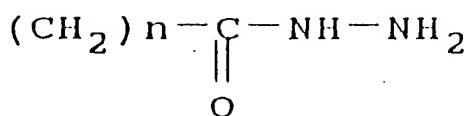


Where Y is
H or $\begin{matrix} C-H \\ || \\ O \end{matrix}$

x

$$(\text{CH}_2)_n - \text{COOH}$$

where $n = 2, 3$ or 4



$$\text{CH}_2 - \text{X}'$$

where x' is I, Br, or Cl

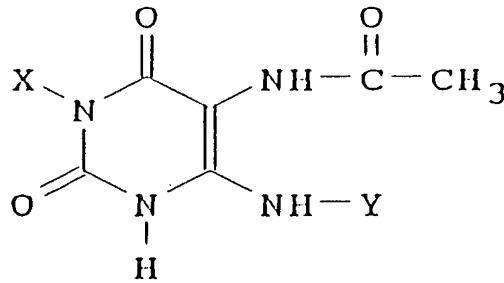
$$\text{CH}_2-\text{S}-\text{(CH}_2\text{)}_n-\text{NH}_2$$

$$\text{CH}_2 - \text{S} - \text{CH}_2 - \text{CH}_2 - \text{OH}$$

正反面-15



Derivatives of ΔAMU (5-acetamino-6-amino-3-methyluracil) or ΔFMU (5-acetamino-6-formylamino-3-methyluracil)

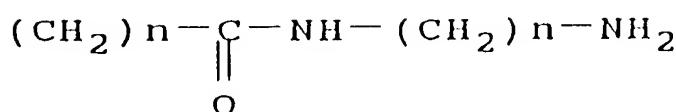
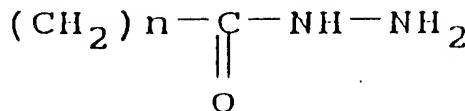


where Y is
 H or $\begin{array}{c} \text{C}=\text{H} \\ || \\ \text{O} \end{array}$

X

$(\text{CH}_2)_n-\text{COOH}$

where $n = 2, 3$ or 4



CH_2-X'

where X' is I, Br, or Cl

$\text{CH}_2-\text{S}- (\text{CH}_2)_n-\text{NH}_2$

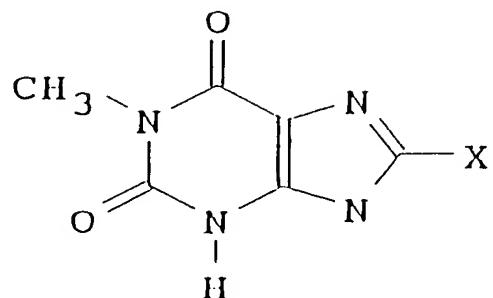
$\text{CH}_2-\text{S}-\text{CH}_2-\text{CH}_2-\text{OH}$

FEB - 16



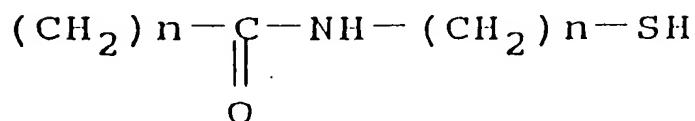
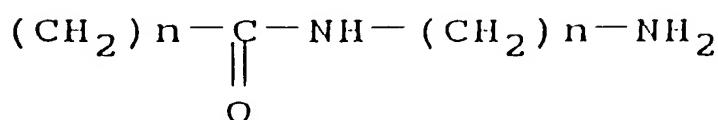
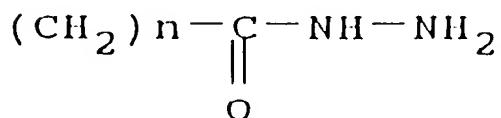
Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPES.....
Inventor: Brian Leyland-Jones

Derivatives of 1X (methylxanthine)



X

$(\text{CH}_2)_n-\text{COOH}$ where $n = 2, 3$ or 4

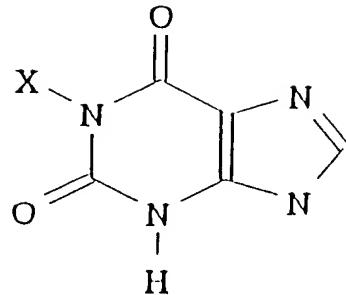


FEB-17



Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING....
Inventor: Brian Leyland-Jones

Derivatives of 1X (methylxanthine)



X

$(\text{CH}_2)_n-\text{COOH}$ where $n = 2, 3$ or 4

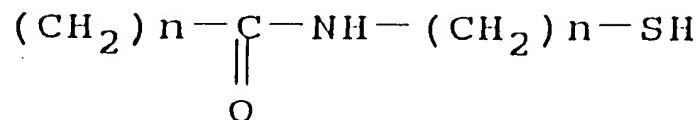
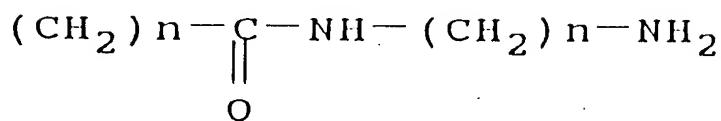
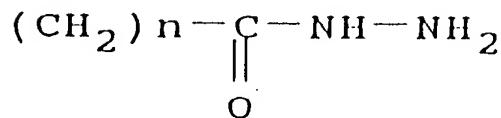


FIG. 1B

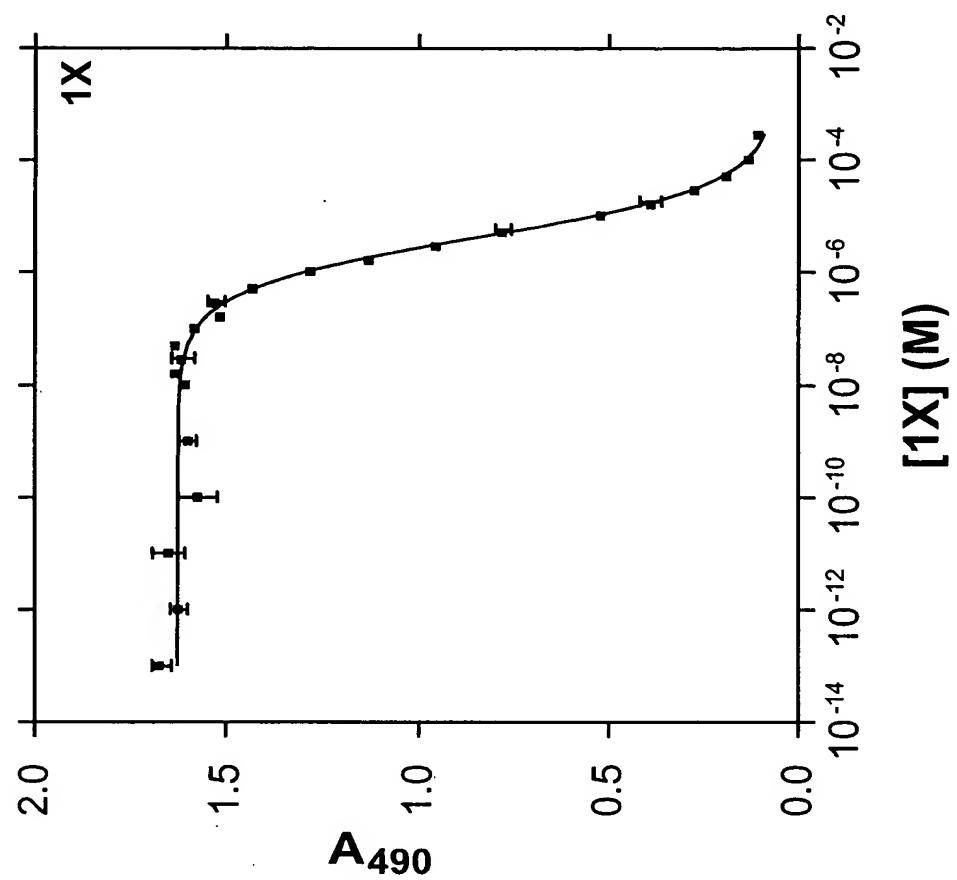
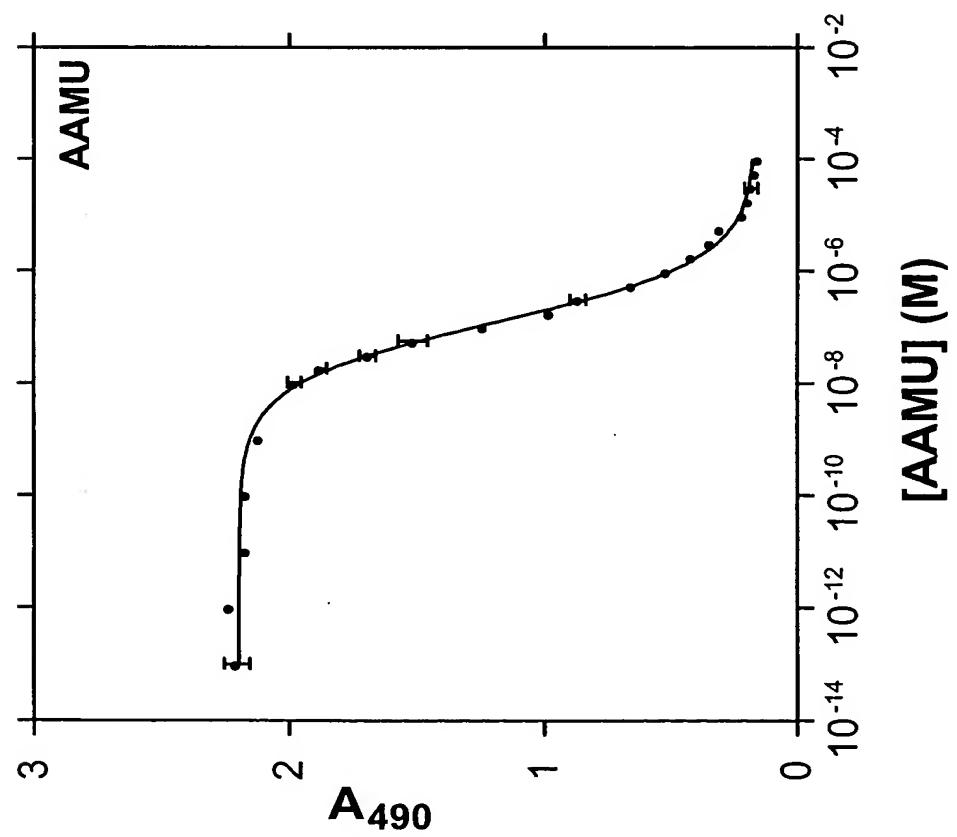
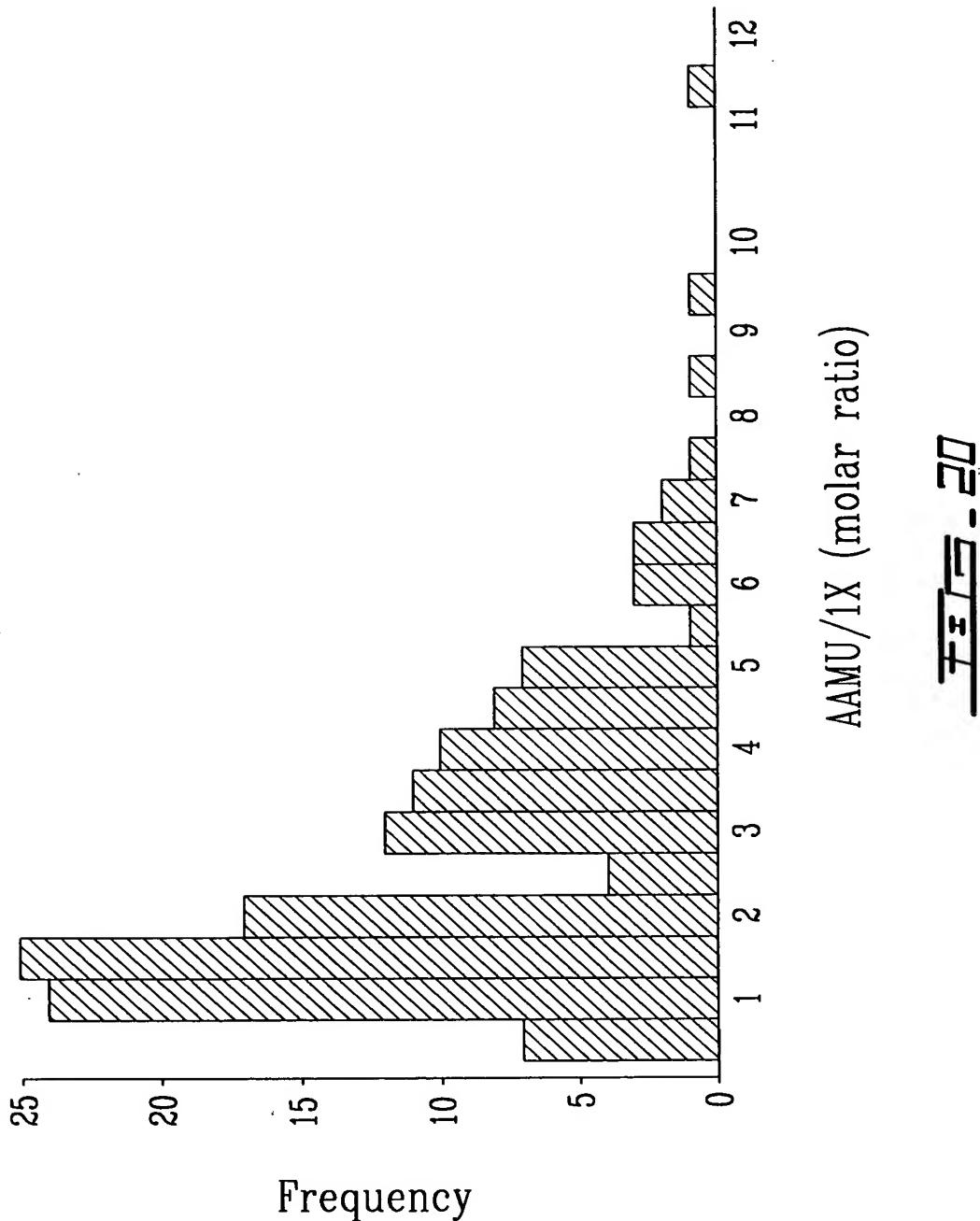
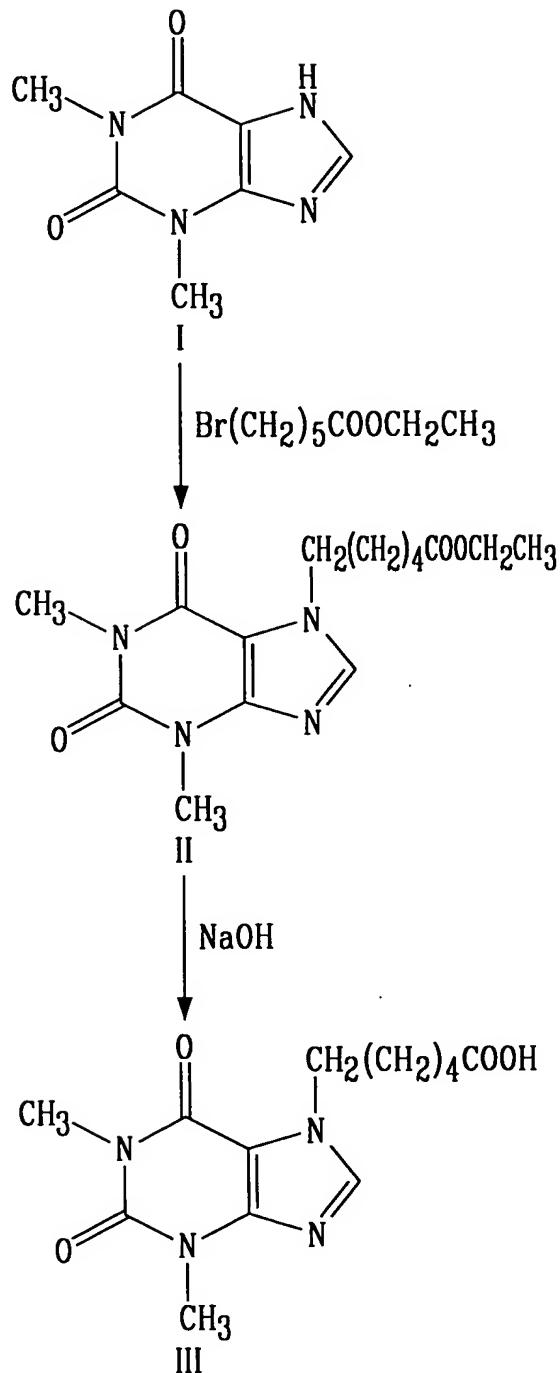


FIGURE - 19







Caffeine derivative

1,7-dimethylxanthine derivative

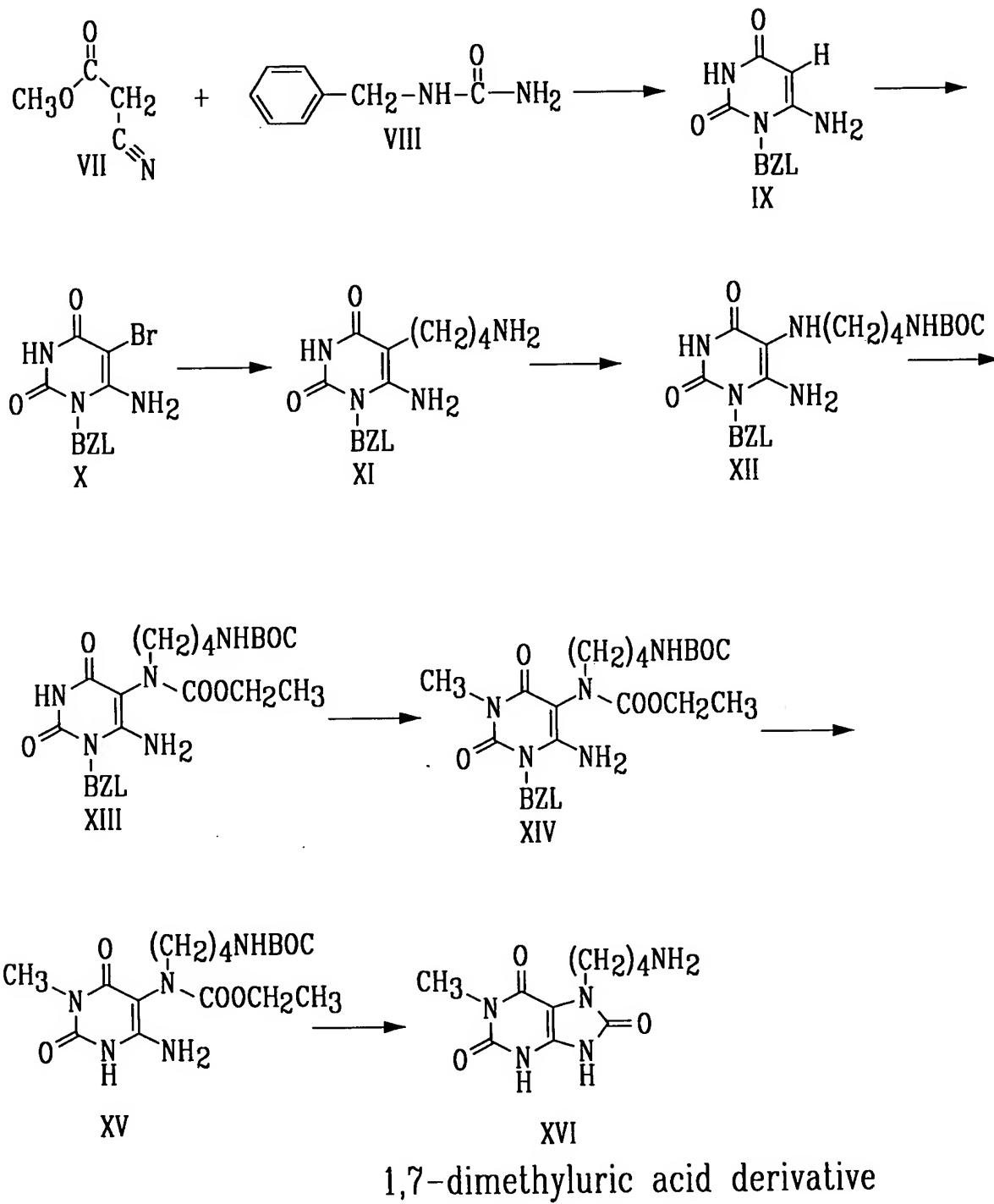


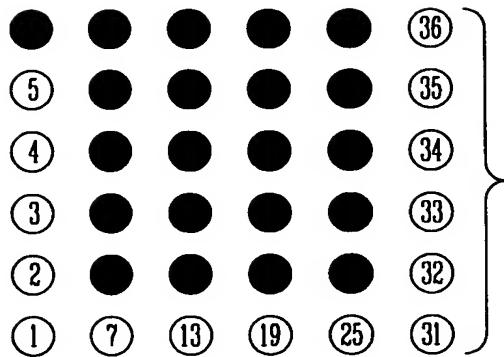


FIG - 23

	1	2	3	4	5	6	7	8	9	10	11	12
A	Blk	STD8	STD16	S1	S9	S5	S1	S9	S5	Blk	STD8	STD16
B	STD1	STD9	STD17	S2	S10	S6	S2	S10	S6	STD1	STD9	STD17
C	STD2	STD10	STD18	S3	S11	S7	S3	S11	S7	STD2	STD10	STD18
D	STD3	STD11	STD19	S4	S12	S8	S4	S12	S8	STD3	STD11	STD19
E	STD4	STD12	STD20	S5	S1	S9	S5	S1	S9	STD4	STD12	STD20
F	STD5	STD13	STD21	S6	S2	S10	S6	S2	S10	STD5	STD13	STD21
G	STD6	STD14	STD22	S7	S3	S11	S7	S3	S11	STD6	STD14	STD22
H	STD7	STD15	STD23	S8	S4	S12	S8	S4	S12	STD7	STD15	STD23



6X6 ARRAY



ALIGNMENT MARKERS - ○

BUFFER BLANKS - ○

ANTIGENS - ●

ANTIGEN KEY:

1. BIOTINYLATED BSA MARKER
- 2-6. BUFFER BLANKS
7. NAT2: AAMU
8. BIOTINYLATED BSA MARKER
9. NAT2: 1X
10. NAT1: pASA
11. NAT1: ACETYL-pASA
12. CYP1A2: CAFFEINE
13. BIOTINYLATED BSA MARKER
14. CYP1A2: 1,7-DMX
15. CYP1A2: 1,7-DMU
16. CYP2A6: COMARIN
17. CYP2A6: 7-HYDROXYCOUMARIN
18. CYP2C19: R- (-) -MEPHENYTOIN
19. BIOTINYLATED BSA MARKER
20. CYP2C19: S- (+) -MEPHENYTOIN
21. CYP2C9: DICLOFENAC
22. CYP2C9: 4-HYDROXYDICLOFENAC
23. CYP2D6: DEXTROMETHORPHAN
24. CYP2D6: DEXTRORPHAN
25. BIOTINYLATED BSA MARKER
26. CYP2E1: CHLORZOXAZONE
27. CYP2E1: 6-HYDROXYCHLORZOXAZONE
28. CYP3A4: MIDAZOLAM
29. CYP3A4: 1-HYDROXYMIDAZOLAM
30. BUFFER BLANK
- 31-36. BIOTINYLATED BSA MARKER

TEST - 24

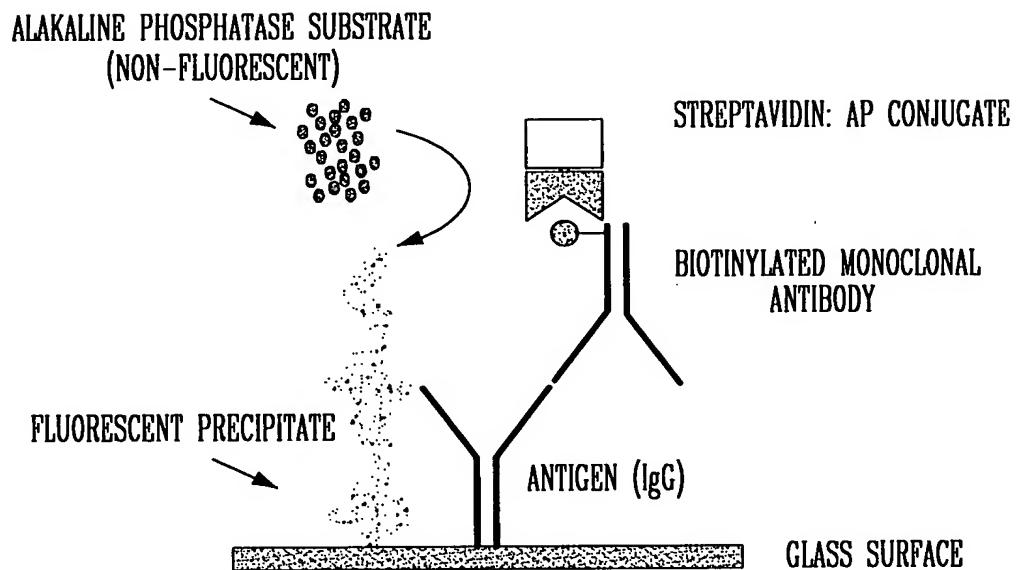


FIG - 26

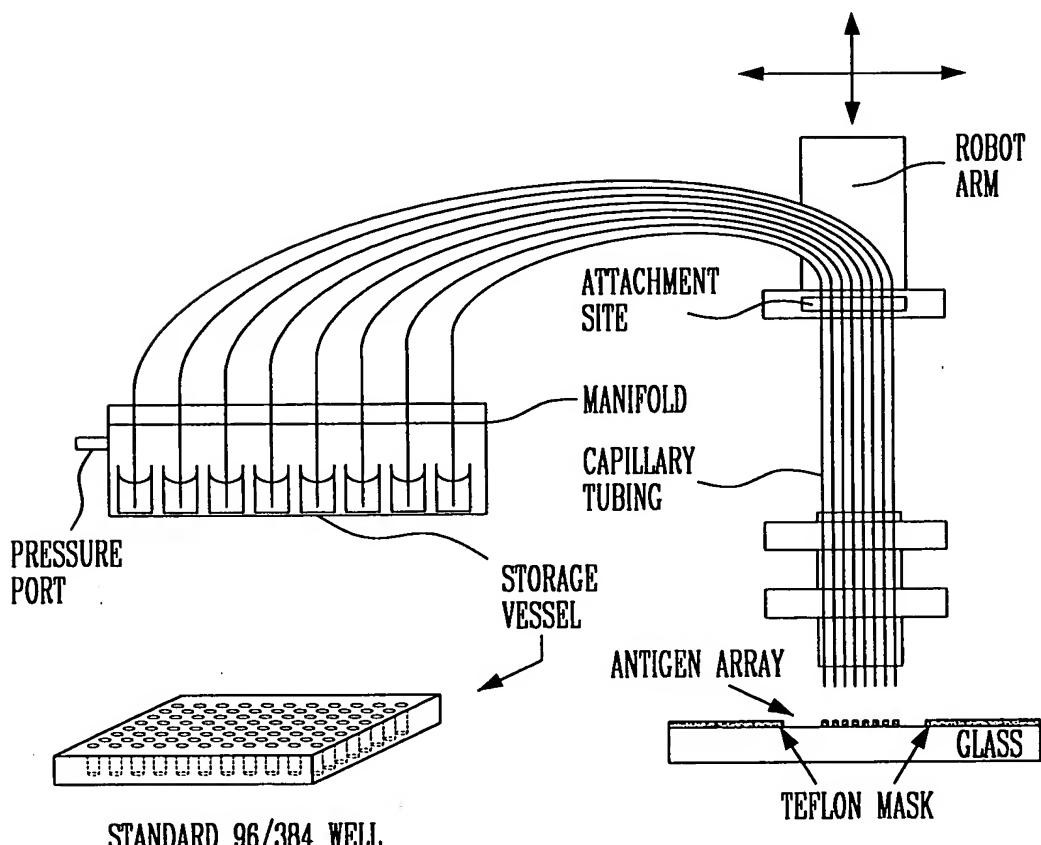
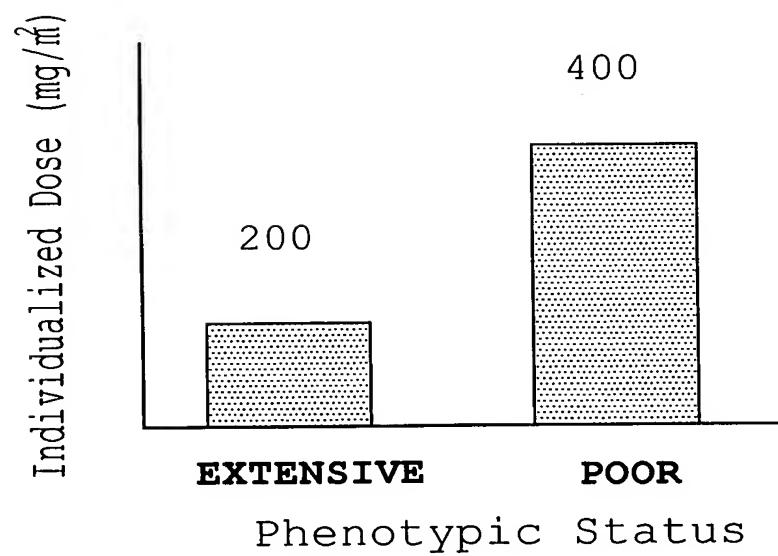
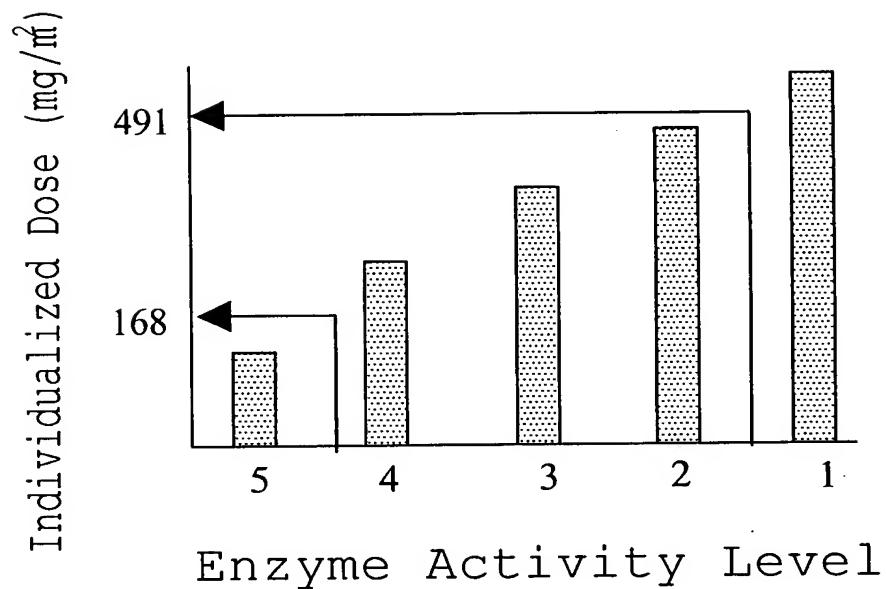


FIG - 27

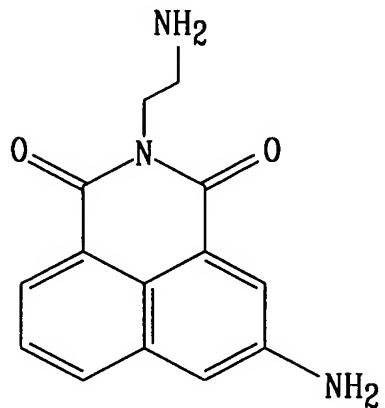


Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPE IN DRUG THERAPY
Inventor: Brian Leyland-Jones

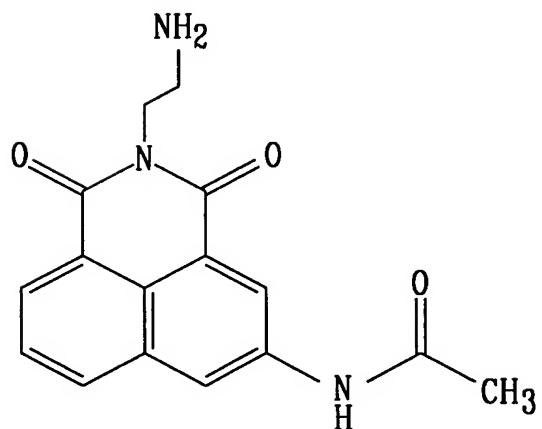




Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING....
Inventor: Brian Leyland-Jones



Amonafide



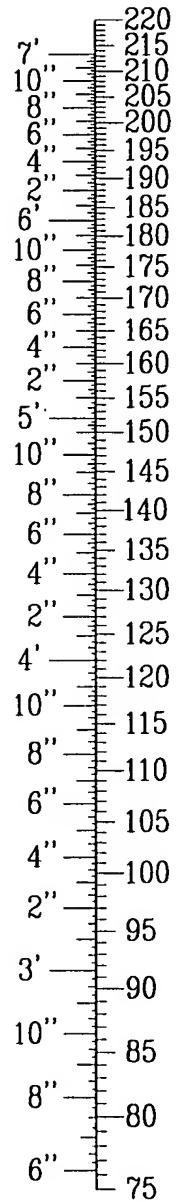
N-Acetyl-Amonafide

FEB - 29



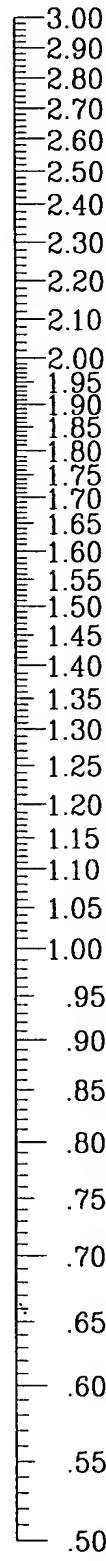
Docket No.: 3298.1003-000
Title: USE OF METABOLIC PHENOTYPING
Inventor: Brian Leyland-Jones

HEIGHT IN FEET

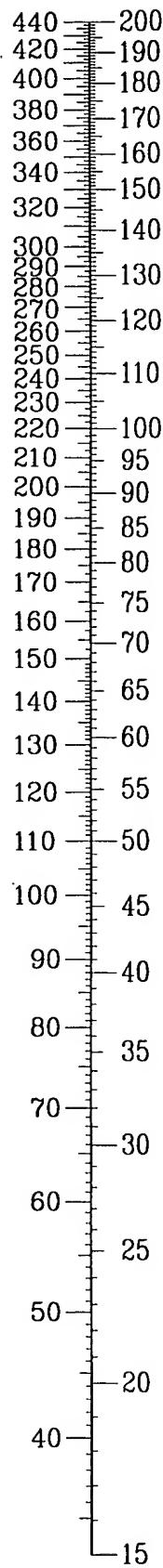


HEIGHT IN CENTIMETERS

SURFACE AREA IN SQUARE METERS



WEIGHT IN POUNDS



HEIGHT IN KILOGRAMS

FEB - 30